CLAIMS

1. A self-heating or self-cooling container, particularly for beverages, comprising a first receptacle (2) containing said beverage and inserted in a second receptacle (3), a first compartment (11) formed between the first and the second receptacle and a second compartment (12) formed on the base of the second receptacle (3) and separated from the first compartment (2) by a breakable diaphragm (13), at least a first and a second component of an exothermic or endothermic reaction being arranged separately and respectively in said compartments, characterized in that said first component is arranged in said first compartment (11) annularly about said first receptacle (2), said diaphragm (13) extending, to separate said compartments, substantially against the base (4) of said first receptacle (2).

2. A container according to claim 1, in which the base of said first receptacle (2) is planar in shape and extends in a manner substantially parallel to said diaphragm (13).

3. A container according to claim 1 or 2, in which said first and second receptacles are substantially cylindrical in shape with the respective side casings (5, 7) substantially parallel with each other.

4. A container according to one or more of the preceding claims, in which there extends in said second compartment (12) a breaking device (14), capable when operated of moving in order to break said breakable diaphragm (13), said breaking device being at least partially deformable when one of said receptacles (2, 3) is encountered.

5. A container according to claim 4, in which said breaking device comprises at least one blade (14) integral with an inward-flexing base (6) of said second receptacle (3) and extending in said second compartment (12) towards said first receptacle (2).

6. A container according to claim 5 in which said at least one blade (14) is deformable by bending.

7. A container according to claim 5 or 6 in which said breaking device comprises four blades (14) standing upright concentrically from said inward-flexing base (6) towards said diaphragm (13).

8. A container according to claim 7 in which, when said base (6) is in an outward-dished position, said blades (14) extend parallel to the axis (X) of said receptacles.

9. A container according to claim 8 in which, this inward-flexing base (6) having a radius of about 25 mm and a curvature of about 75 mm, said blades (14) are positioned on said base at a distance of between 12 mm and 13 mm from the centre of said base.

10. A container according to one or more of claims 5 to 9, in which a free end of said at least one blade (14) close to said diaphragm (13) is shaped in a point.

11. A container according to claim 10 in which said at least one blade (14) comprises a serrated edge at said free end.

12. A container according to one or more of the preceding claims, in which said first component is in the form of a granular solid and said second component is a liquid.

13. A container according to claim 12, in which said first component is selected from the group consisting of anhydrous calcium chloride, calcium chloride, urea and sodium thiosulphate and said second component is water.

14. A method of manufacturing a self-heating or self-cooling container, particularly for beverages, comprising the steps of:

- arranging a first and a second receptacle (2, 3) such that the first receptacle is capable of being inserted into the second receptacle, thus forming a closed chamber (10) between said receptacles,
- arranging between the base (4) of the first receptacle and the base (6) of the second receptacle a breakable diaphragm (13) subdividing said chamber (10) into a first compartment (11) formed between the first and the second receptacle and into a second compartment (12) formed on the base of the second receptacle (3)

- arranging separately in said compartments (11, 12) respectively a first and a second component capable of exothermic or endothermic reaction when placed in contact with each other,

characterized in that said first component is arranged in said first compartment (12) in an annular position around said first receptacle (2) and said diaphragm (13) is arranged against the base (4) of said first receptacle.

15. A method according to claim 14 in which said first component is arranged in said annular position as a result of a rapid rotation of the second receptacle (3) about a main axis (X) of the receptacle, so that the first component is pressed by the effect of the centrifugal force resulting from said rotation against the side casing (7) of the second receptacle, the first receptacle (2) being inserted into the position of connection to the second receptacle (3) during said rotation.

16. A method according to claim 15 in which, during the rotation phase, a deflector device (20) is inserted into said second receptacle (3) to assist the positioning of said first component against the side casing (7) of the second receptacle (3).

17. A method according to claim 16 in which said deflector device (20) is inserted axially into said second receptacle (3) and is then moved radially towards said side casing (7) up to a distance equal to the thickness required to arrange said first component in said annular position around said first receptacle (2).

18. A method according to claim 16 or 17 in which said first component has a grain size of between 1 and 2 mm and said second receptacle is made to rotate at a speed of about 500 rpm.

19. A method according to claim 14 in which said first component is arranged in said annular position as a result of the following steps:

- positioning the second receptacle (3) with the mouth upwards and arranging the first component in the first compartment (11),

- partially inserting the first receptacle (2) into the second receptacle (3) and arranging a seal (30) between said receptacles so as to close to the outside the chamber (10) formed between them,
- simultaneously inverting and positioning said receptacles (2, 3) with their respective mouths downwards, in such a way that the first component flows down by gravity around the casing (5) of the first receptacle (2) in said annular position,
- inserting the first receptacle (2) into the second receptacle (3), while said receptacles are in the position defined in the preceding step.

20. A method according to claim 19, in which said seal (30) is placed against said receptacles so that it abuts against the edge of the mouth of the first receptacle (2) and is adjacent to the second receptacle (3) in continuation of the casing (7) of that receptacle.

21. A method according to claim 20, in which said seal (30) is produced from elastic material and is compressed during said phase of insertion of the first receptacle into the second receptacle.